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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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08/31/2001

Michael J. LaGasse

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2219

27572

7590

09/10/2004

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EXAMINER

PHAN, HANH

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/944,974

Applicant(s)

LAGASSE, MICHAEL J.

Examiner

Hanh Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6-11, 15-17 is/are rejected.
- 7) ☒ Claim(s) 3-5, 12-14, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>09/01/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 7-10, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Prior Art Figure 1 in view of Nomura (US Patent No. 6,731,881).

Regarding claims 1 and 16, the Prior Art Figure 1 teaches a cosite interference rejection system comprising:

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an interference subsystem (i.e., an interference subsystem 22, Prior Art Fig. 1) coupled to a transmit system (i.e., a transmit system 24, Prior Art Fig. 1), the interference subsystem weighting a sampled transmit signal based on a feedback signal such that the weighted signal is out of phase with the sampled transmit signal;

a cancellation subsystem (Prior Art Fig. 1) coupled to the interference subsystem (22) and a receive antenna (i.e., receive antenna 25); and

a feedback loop (26) for providing the feedback signal to the interference subsystem (22) based on the desired receive signal.

The Prior Art Fig. 1 differs from claims 1 and 16 in that it fails to teach the cancellation subsystem is an optical cancellation subsystem. However, Nomura in US Patent No. 6,731,881 teaches the cancellation subsystem is an optical cancellation subsystem (Figs. 3 and 4, col. 6, lines 67 and col. 7, lines 1-60). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the cancellation subsystem is an optical cancellation subsystem as taught by Nomura in the system of the Prior Art Fig. 1. One of ordinary skill in the art would have been motivated to do this since Nomura suggests in column 6, lines 67 and col. 7, lines 1-60 using such the cancellation subsystem is an optical cancellation subsystem have advantage of allowing preventing the deterioration due to interference by canceling the interference components from an optical transmitter.

Regarding claim 7, the Prior Art Figure 1 further teaches power transmitted by the transmit system is coupled to the receive antenna.

Regarding claim 8, the Prior Art Figure 1 further teaches the interference

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subsystem (22) includes: an amplifier for amplifying the sampled transmit signal and an amplitude and phase.

Regarding claims 9 and 10, the Prior Art Figure 1 further teaches the feedback loop includes a coupler for sampling the desired receive signal.

4. Claims 2, 6, 11, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Prior Art Figure 1 in view of Nomura (US Patent No. 6,731,881) and further in view of LaGasse (US Patent No. 5,724,169).

Regarding claims 2, 11 and 17, the combination of Prior Art Figure 1 and Nomura differs from claims 2, 11 and 17 in that it fails to teach the optical cancellation subsystem includes an optical source for generating the optical signal; a modulation network coupled to the optical source, the receive antenna, and a demodulation system coupled to the modulation network, the demodulation system demodulating the phase modulated optical signal. However, LaGasse teaches an optical source (11) for generating the optical signal; a modulation network (phase modulator 15) coupled to the optical source (11), the receive antenna (17), and a demodulation system (25) coupled to the modulation network, the demodulation system demodulating the phase modulated optical signal (Fig. 1, col. 5, lines 40-67 and col. 6, lines 1-52). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the cancellation subsystem includes an optical source for generating the optical signal; a modulation network coupled to the optical source, the receive antenna, and a demodulation system coupled to the modulation network, the

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demodulation system demodulating the phase modulated optical signal as taught by LaGasse in the system of the combination of the Prior Art Fig. 1 and Nomura. One of ordinary skill in the art would have been motivated to do this since LaGasse suggests in column 5, lines 40-67 and col. 6, lines 1-52 that using the optical cancellation subsystem includes an optical source for generating the optical signal; a modulation network coupled to the optical source, the receive antenna, and a demodulation system coupled to the modulation network, the demodulation system demodulating the phase modulated optical signal have advantage of allowing conveying signals from one remote site to another site and, more particularly, to fiber optic links for conveying signals from one remote site to the another site.

Regarding claims 6 and 15, the combination of Prior Art Figure 1, Nomura and LaGasse teaches the optical source is a laser (Fig. 1 of LaGasse).

### ***Allowable Subject Matter***

5. Claims 3-5, 12-14, 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

A handwritten signature in cursive script, appearing to read 'Hanh Phan', is written over a horizontal line.

Hanh Phan

09/01/2004